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PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: DENNIS SMITH

INVENTION: EXERCISE ELEMENT

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SPECIFICATION

To All Whom It May Concern:

Be it known that Dennis Smith, citizen of the United States of America, residing at: 30685 County Road 10, Granger, Indiana 46530, respectively, has invented certain new and useful improvements in an

EXERCISE ELEMENT

of which the following is a specification.

## **Exercise Device and Method of Exercising**

### **BACKGROUND**

- [0001]** This disclosure relates to an apparatus and method for exercising. In particular, the present disclosure relates to an exercise device which moves in conjunction with a body part to provide equal resistance in any direction during a workout while remaining in contact with the body part.
- [0002]** In the field of exercise equipment, a variety of fitness and training techniques are known. A common exercise technique known as free weight training comprises moving one or more weights mounted to a support. In the free weight exercise technique, the user directly moves the support which is connected to the weight. Thus, the support/weight provides the resistive force for the technique. In another form of exercise training, weights are associated with a lifting machine, wherein the weights are connected to the lifting machine by cables. In this exercise technique, the user grips the handle connected to the cable and moves the weight attached to the cables. These techniques work only one dimension at a time in succession. As such, the techniques, however, are not conducive for mobile exercises such as aerobics.
- [0003]** Another type of exercise device is a weight that is placed around the ankle or the wrist. This type of device frees the user from having to work with any type of equipment. A problem with this device is that the weight centralizes the load around the ankle or wrist minimizing full exercise benefits. In addition, because these devices are attached to a general circular body part area, it is difficult to constrain the device while the user performs exercise movements. Thus, these devices move up and down with respect to the ankle or wrist causing discomfort to the user which minimizes the exercise benefit. Because this device is not fully constrained, the movement of the user during exercise generally results in heightened relative movement of the device with respect to the body part. This device slippage counteracts the desired training effect and can cause instability and discomfort to the user.
- [0004]** Another problem with current exercise devices is that the devices are configured for a specific weight amount. As such, the devices limit the available weight variety to the user. It is desirable to readily change the amount of weight during exercise movements to further strengthen the body part.

**[0005]** Efficient and comfortable exercise devices are crucial for a beneficial training regimen. As such, exercise devices need to disperse the load across an entire body part while being constrained to the body part during movement. Additionally, the exercise device must comfortably fit over the body part. Accordingly, a need exists for an exercise device that is restrained over a body part to prevent slippage during exercise movements. The solution, however, must be comfortable for the user to wear. A need also exists for an exercise element that disperses evenly a weighted load across the body part. The solution, however, must also provide differing amounts of weights in a convenient manner to use.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0006]** The disclosure will become apparent from the following description and accompanying drawings wherein:

**[0007]** Fig. 1 illustrates a perspective view of an embodiment of the exercise device with a handle disposed within the exercise device;

**[0008]** Fig. 2 illustrates a side view of the exercise device of Fig. 1 showing a plurality of pockets around a member of the exercise device;

**[0009]** Fig. 3 illustrates a plan view of different size weights which are inserted into the pockets of Fig. 1;

**[00010]** Fig. 4 illustrates a back view of the exercise device of Fig. 1 showing the handle near an end and showing a body area near another end of the exercise device;

**[00011]** Fig. 5a & 5b illustrate cross sectional views of body parts disposed through the exercise device;

**[00012]** Fig. 6 illustrates a front view of the exercise device with the handle in a vertical position;

**[00013]** Fig. 7 illustrates a view of the exercise device maintaining contact with the body part as the body part performs exercise movements.

### SUMMARY OF THE DISCLOSURE

**[00014]** This disclosure relates to an apparatus and method for exercising. In particular, the present disclosure relates to an exercise device which moves in conjunction with a body part to provide equal resistance in any direction during a workout while remaining in contact with the body part. The disclosure includes an exercise device comprising a garment having a first end and a second end, wherein the first end has a ventilated area and the second end has a body area. A member is disposed between the first end and the second end in order to flexibly position around the body part. The device further includes a plurality of pockets uniformly disposed around the member. Additionally, a handle fastens within the member near the first end, wherein the handle connects with the body part to maintain contact between the body part and the member while the body part performs exercise movements.

**[00015]** The disclosure further includes a method of using an exercise device which moves in conjunction with a body part while the body part moves through exercise techniques. The method comprises inserting a body part through a body area of a member and uniformly disposing the member around the body part. Next, the body part connects with a handle disposed within the member which constrains the body part to the member while the body part performs exercise techniques.

### DESCRIPTION OF THE DISCLOSURE

**[00016]** As stated the present disclosure relates to an exercise device and a method of exercising. In particular, the present disclosure relates to an exercise device that remains constrained to a body part while the body part performs aerobic and anaerobic exercise movements.

**[00017]** Fig. 1 illustrates in a perspective view an embodiment of the present disclosure generally shown as garment 10. The garment 10 comprises a first end 12 and a second end 14, wherein the second end 14 is oppositely positioned from the first end 12. The first end 10 includes a ventilated area 16 which is free from material to expose the interior of the garment 10 while the second end 16 includes a body area 18 which forms around the body part as will be discussed. A member 20 having a plurality of areas 22 such as a top, bottom and sides is disposed between the first end 10 and the

second end 14, wherein the member 20 comprises a flexible material. A plurality of pockets 24 uniformly dispenses around the member 20, wherein the pockets 24 are associated with the areas 22. The pockets 24 may be associated with the top area 22 as shown. Additionally, the pockets 24 may be associated with bottom and side areas 22. The garment 10 also comprises a handle 26 positioned within the member 20 near the first end 12.

**[00018]** Turning to Fig. 2, the garment 10 is illustrated in a side elevational view, showing pockets 24 uniformly disposed along the side areas 22. The pockets 24 integrate with the areas 22 to hold a plurality of weights 28. The pockets 24 are disposed along the length of the areas 22 to uniformly distribute each weight 28 along the member 20, as will be discussed. In an embodiment, two pockets 24 are disposed along each top, bottom and side areas 22, wherein the pockets 24 have diameters in the range of one inch to three inches. Other embodiments may include one pocket 24 or more than two pockets 24 per area 22. Each pocket 24 may include an opening 30 which receives the weight 28 such that the opening 30 seals the weight 28 into the pocket 24 by fasteners such as but not limited to Velcro®.

**[00019]** As shown in Fig. 2, the plurality of weights 28 removably insert within the pocket 24. In an embodiment, the weights 28 comprise a packet of individual beads which freely move within the packet. Accordingly, the packet prevents any beads becoming loose within the pockets 24. In this configuration, each weight 28 flexibly positions within each respective pocket 24. Additionally, each weight 28 may comprise different amounts of beads to correspond with different density amounts. In an embodiment, each weight 28 has a value of 2 ½ lbs. In other embodiments, the weights 28 have density values in the range of 0.5 lbs to 3 lbs.

**[00020]** Turning to Fig. 3, weights 28 are shown separated from the garment 10 (Fig. 1). In this embodiment, the weights 28 comprise solid deformable members which easily insert into the pockets 24 (Fig. 2). As such, the weights 28 flex during movements by the user. Further, the weights 28 comprise different density amounts to provide a variety of resistant forces to the user. In this embodiment, the solid deformable weight 28 may be sold as a kit for the garment 10 to provide a variety weight amounts available to the user.

**[00021]** Turning to Fig. 4, the garment 10 is illustrated from a back view showing the handle 26 in the horizontal position. As shown, the handle 26 is positioned near the ventilated area 16, while being positioned opposite the body area 18. The ventilated area 16 allows direct exposure of the environment to the handle 26 to assist in cooling the interior of the member 20 during use. The body area 18, meanwhile, is positioned near the second end 14 to constrict around a body part 32 (Fig. 5) as will be discussed.

**[00022]** Turning to Figs. 5a and 5b, the body part 32 is shown disposed through the garment 10 such that the member 20 is flexibly positioned around the body part 32. In configuration of Fig. 5a, the body part 32 comprising a hand and forearm inserts through the flexible member 20. The body area 18 configures around the body part 32 to further assist in a tight fit of the member 20 around the body part 32. Since the handle 26 is positioned near the first end 12, portions of the body part 32 such as a hand easily connect with the handle 26. Additionally, since the pockets 24 are disposed along the member 20, the corresponding weights 28 are uniformly distributed around the body part 32. In the configuration of Fig. 5a, the handle 26 connects with the body part 32 while the handle 26 is in the horizontal position. Accordingly, the hand can easily connect with the handle 26 to constrain the body part 32 within the member 20. Additionally, the ventilated area 16 exposes the handle 26 and body part 32 to the environment to assist in cooling the body part 32.

**[00023]** As shown in Fig. 5b, the body part 32 comprising a foot, ankle and lower leg inserts through the flexible member 20. In this configuration, the handle 26 easily connects with the foot while the handle 26 is in the horizontal position to constrain the body part 32 with the member 20. Additionally, the ventilated area 16 exposes the handle 26 and body part 32 to the environment to assist in cooling the body part 32. The body area 18 configures around the body part 32 to further assist on a tight fit of the member 20 around the body part 32 to further assist on a tight fit of the member 20 around the body part 32. In this configuration, the foot connects with the handle 26 via pressure applied by the foot below and against the handle 26. Alternatively, the foot may be positioned above the handle 26 to apply pressure above and against the handle 26.

**[00024]** Turning to Fig. 6, the handle 26 is positioned in a vertical position. As such, the handle 26 is moveable between the horizontal position and the vertical position via slots 32. The handle 26 is configured to be releasable from the member 20. Thus, the handle 26 is movable to a preferred gripping position for the user. In this configuration, the body part 32 easily connects with the handle 26 while remaining exposed to the environment via the ventilated area 16.

**[00025]** Turning to Fig. 7, the user can easily perform weighted mobile, anaerobic or aerobic exercises using the garment 10 of the present disclosure. During use, the user opens at least one of the openings 36 of the at least one of the pockets 24 to expose the pocket 24. Then the user inserts at least one weight 28 into the respective pocket 24. Since the pockets 24 are uniformly distributed around the member 20, the user can insert weights 28 into all the pockets 24 to provide uniform resistance to the body part 32 as the body part 32 performs exercise techniques. The user may also load weights 28 into some of the pockets 24 while leaving other pockets 24 free of weights 28 to provide more resistance to a certain portion of the body part 32. For example, to strengthen muscles, ligaments and tendons injured by carpal tunnel syndrome, the user may insert weights 28 into the pockets 24 located at the top and bottom areas 22 of the member 20 since these areas 22 correspond to the injured body part 32.

**[00026]** Since the pockets 24 seal weights 28 of different density amounts, the user may also insert weights 28 having the same density into the pockets 24 to provide uniform resistance around the body part 32. For example, the user may insert one pound weights 28 in all the pockets 24. Additionally, the user may insert weights 28 having different density amounts into the pockets 24 to apply non-uniform resistance while the body part 32 performs exercise techniques. For example, the user may insert two pound weights 28 in the top and bottom areas 22 and may insert half pound weights 28 in the side areas 22. Regardless of the amount of weights 28 inserted by the user, each weight 28 flexibly positions within the plurality of pockets 24. The user then closes the opening 36 to seal the weights 28 inside the pockets 24.

**[00027]** After sealing the plurality of weights 28 into the plurality of pockets 24, the user inserts the body part 32 into the member 20 via the body area 18. As such, the member 20 slides over portions of the body part 32 such as the hand or forearm. Since

the member 20 comprises a flexible material, the member 20 uniformly disposes around the body part 32. While the body area 18 configures tightly around the body part 32, the user manipulates the body part 32 to connect with the handle 26. As shown in Fig. 5a, portions of the body part 32 such as the hand easily connect with the handle 26. As shown in Fig. 5b, portions of the body part 32 such as the foot easily connects with the handle 26.

**[00028]** After connecting with the handle 26, the user then moves the body part 32 through a variety of exercise techniques while preventing slippage of the garment 10. Since the body part 32 connects with the handle 26, the body part 32 remains constrained within the member 20 throughout the exercise techniques. In other words, the handle 26 maintains contact between the member 20 and the body part 32. As such, the garment 10 does not move relative to the body part 32 but instead moves in conjunction with the body part 32 to provide consistent resistance to the body part 32. Thus, during use, the user can move the body part 32 through a variety of fluid movements without the garment 10 slipping off the body part 32. This consistent resistance improves the exercise efficiency while providing a more comfortable exercise routine. Additionally, the ventilated area 16 enhances air movement inside the member 20 and across the handle 26. As such, the ventilated area 16 cools the body part 32 during the exercise movements.

**[00029]** The present disclosure allows the user to strengthen muscles in multiple dimensions. As such, the present disclosure allows the user to strengthen muscles during reproduction of movements the body goes through during exercises such as pitching, shooting, punching and stroking. Thus, the present disclosure results in a synergism to use the flowing movements of the body to produce a faster and greater stimulation of the muscle fibers.

**[00030]** Furthermore, since the weights 28 flexibly insert within the pockets 24, the weights 28 deform within the pockets 24 during the exercise techniques. During use, this deformation of the weights 28 during the exercise techniques provide more fluid movement with respect to the body part 32.

**[00031]** In another method of use, the user may twist the body part 32 connected with the handle 26. In response, the handle 26 torsionally resists movement via the slots 32



positioned within the member 20. For example, the user may connect the hand with handle 26 and may rotate the hand while the forearm performs the exercise movements. During these exercise movements, the handle 26 torsionally resists the twisting of the body part 32 to enhance the exercise routine.

**[00032]** While the concepts of the present disclosure have been illustrated and described in detail in the drawings and foregoing description, such an illustration and description is to be considered as exemplary and not restrictive in character, it being understood that only the illustrative embodiments have been shown and described and that all changes and modifications that come within the spirit of the disclosure are desired to be protected by the following claims.